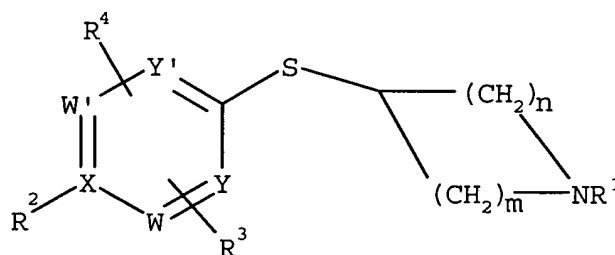


**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

1. (Currently amended) A method of treatment of a condition indicating treatment with a beta 4 subtype selective nicotinic acetylcholine receptor modulator comprising administering an effective amount of a compound represented by Formula (I) or pharmaceutically acceptable salts thereof:



(I)

wherein:

R<sup>1</sup> is -H,

C<sub>1-12</sub>alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C<sub>1-4</sub>alkoxy or C<sub>1-4</sub>alkylthio, or

aryl-C<sub>1-4</sub>alkyl;

R<sup>2</sup> is -H,

-OH,

-C(O)-NH<sub>2</sub>,

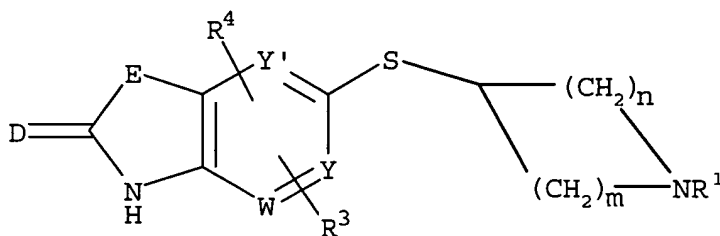
-NH<sub>2</sub>,

-NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or -SO<sub>2</sub>-;

V is H, aryl, aryl-C<sub>1-12</sub>alkyl, diaryl-C<sub>1-12</sub>alkyl, lactonyl, or C<sub>1-18</sub>alkyl optionally substituted with halogen, hydroxyl, C<sub>1-4</sub>alkoxy, -C(O)OC<sub>1-4</sub>alkyl, -OC(O)C<sub>1-4</sub>alkyl, aryl-C<sub>1-4</sub>alkoxy, aryloxy, or SO<sub>2</sub>C<sub>1-4</sub>alkyl; and

T is H, halogen, C<sub>1-3</sub>alkyl, C<sub>1-4</sub>alkoxy, nitro, aryl, aryl-C<sub>1-4</sub>alkyl, or aryloxy unless V is H in which case T is absent; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)



(Ia)

wherein D is O or S; and

E is O, S, NR<sup>5</sup>, C(R<sup>5</sup>)<sub>2</sub>, O-CR<sup>5</sup><sub>2</sub>, NR<sup>5</sup>-CR<sup>5</sup><sub>2</sub>, NR<sup>5</sup>-CO, CR<sup>5</sup><sub>2</sub>-O, CR<sup>5</sup><sub>2</sub>-S(O)<sub>r</sub>, CR<sup>5</sup><sub>2</sub>-NR<sup>5</sup>, CR<sup>5</sup><sub>2</sub>-CR<sup>5</sup><sub>2</sub>, CO-NR<sup>5</sup>, or CR<sup>5</sup>=CR<sup>5</sup>;

unless X is N in which case R<sup>2</sup> is absent

R<sup>3</sup> is H, halogen, C<sub>1-4</sub>alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF<sub>3</sub>, OC<sub>1-4</sub>alkyl, aryloxy, arylC<sub>1-4</sub>alkyl, arylC<sub>1-4</sub>alkoxy, C<sub>3-10</sub>cycloalkoxy, carboxy, carbonamido, -CO-, -CO<sub>2</sub>H, -NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, aryl, hydroxy, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHC<sub>1-4</sub>alkyl, or -C<sub>1-4</sub>alkyl-OH;

R<sup>4</sup> is H, halogen, C<sub>1-4</sub>alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF<sub>3</sub>, OC<sub>1-4</sub>alkyl, aryloxy, arylC<sub>1-4</sub>alkyl, arylC<sub>1-4</sub>alkoxy, C<sub>3-10</sub>cycloalkoxy, carboxy, carbonamido, -CO-, -CO<sub>2</sub>H, -NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, aryl, hydroxy, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHC<sub>1-4</sub>alkyl, or -C<sub>1-4</sub>alkyl-OH;

R<sup>5</sup> is each independently H or C<sub>1-4</sub>alkyl;

X is C or N;

W is C or N;

W' is C or N;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring;

m is 1, 2, or 3;

n is 1, 2, or 3; and

the sum of m and n is ~~2, 3, 4, 5, or 6~~;

provided that

when X, W, W', Y and Y' are all C, R<sup>3</sup> and R<sup>4</sup> are H and R<sup>1</sup> is selected from H,

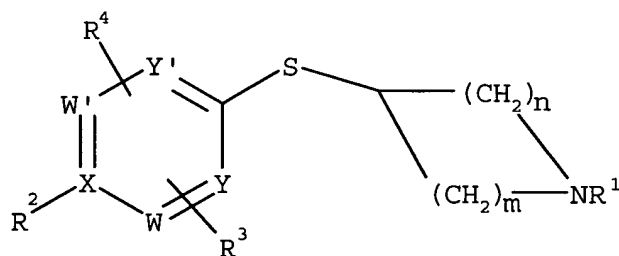
unsubstituted C<sub>1-4</sub>alkyl and unsubstituted C<sub>3-4</sub>cycloalkyl, R<sup>2</sup> may not be -OH;

and that

when one of X, Y and Y' is N, R<sup>3</sup> and R<sup>4</sup> are H and R<sup>1</sup> is selected from H, unsubstituted C<sub>1-4</sub>alkyl and unsubstituted C<sub>3-4</sub>cycloalkyl, R<sup>2</sup> may not be H.

2. (Original) The method of claim 1 provided that when X, W, W', Y and Y' are all C and R<sup>3</sup> and R<sup>4</sup> are H, R<sup>2</sup> may not be -OH; and that when one of X, Y and Y' is N and R<sup>3</sup> and R<sup>4</sup> are H, R<sup>2</sup> may not be H.

3. (Currently amended) A method of treatment of dysfunctions of the central and autonomic nervous systems comprising administering an effective amount of a compound represented by Formula (I) or pharmaceutically acceptable salts thereof:



(I)

wherein:

R<sup>1</sup> is -H,

C<sub>1-12</sub>alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C<sub>1-4</sub>alkoxy or C<sub>1-4</sub>alkylthio, or

aryl-C<sub>1-4</sub>alkyl;

R<sup>2</sup> is -H,

-OH,

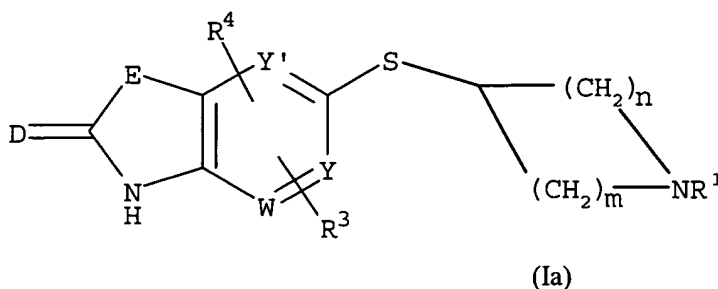
-C(O)-NH<sub>2</sub>,

-NH<sub>2</sub>,

-NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or -SO<sub>2</sub>-;

V is H, aryl, aryl-C<sub>1-12</sub>alkyl, diaryl-C<sub>1-12</sub>alkyl, lactonyl, or C<sub>1-18</sub>alkyl optionally substituted with halogen, hydroxyl, C<sub>1-4</sub>alkoxy, -C(O)OC<sub>1-4</sub>alkyl, -OC(O)C<sub>1-4</sub>alkyl, aryl-C<sub>1-4</sub>alkoxy, aryloxy, or SO<sub>2</sub>C<sub>1-4</sub>alkyl; and T is H, halogen, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>alkoxy, nitro, aryl, aryl-C<sub>1-4</sub>alkyl, or aryloxy unless V is H in which case T is absent; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)



wherein D is O or S; and

E is O, S, NR<sup>5</sup>, C(R<sup>5</sup>)<sub>2</sub>, O-CR<sup>5</sup>, NR<sup>5</sup>-CR<sup>5</sup>, NR<sup>5</sup>-CO, CR<sup>5</sup>-O, CR<sup>5</sup>-S(O)<sub>r</sub>, CR<sup>5</sup>-NR<sup>5</sup>, CR<sup>5</sup>-CR<sup>5</sup>, CO-NR<sup>5</sup>, or CR<sup>5</sup>=CR<sup>5</sup>;

unless X is N in which case R<sup>2</sup> is absent

R<sup>3</sup> is H, halogen, C<sub>1-4</sub>alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF<sub>3</sub>, OC<sub>1-4</sub>alkyl, aryloxy, arylC<sub>1-4</sub>alkyl, arylC<sub>1-4</sub>alkoxy, C<sub>3-10</sub>cycloalkoxy, carboxy, carbonamido, -CO-, -CO<sub>2</sub>H, -NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, aryl, hydroxy, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHC<sub>1-4</sub>alkyl, or -C<sub>1-4</sub>alkyl-OH;

R<sup>4</sup> is H, halogen, C<sub>1-4</sub>alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF<sub>3</sub>, OC<sub>1-4</sub>alkyl, aryloxy, arylC<sub>1-4</sub>alkyl, arylC<sub>1-4</sub>alkoxy, C<sub>3-10</sub>cycloalkoxy, carboxy, carbonamido, -CO-, -CO<sub>2</sub>H, -NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, aryl, hydroxy, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHC<sub>1-4</sub>alkyl, or -C<sub>1-4</sub>alkyl-OH;

R<sup>5</sup> is each independently H or C<sub>1-4</sub>alkyl;

X is C or N;

W is C or N;

W' is C or N;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring;

m is 1, 2, or 3;

n is 1, 2, or 3; and

the sum of m and n is ~~2, 3, 4, 5, or 6~~;

provided that when X, W, W', Y and Y' are all C and R<sup>3</sup> and R<sup>4</sup> are H, R<sup>2</sup> may not be -OH;

and that when one of X, Y and Y' is N and R<sup>3</sup> and R<sup>4</sup> are H, R<sup>2</sup> may not be H;

and that when R<sup>2</sup> is H, OH or NH<sub>2</sub> and R<sup>3</sup> and R<sup>4</sup> are H, R<sup>1</sup> may not be aryl-C<sub>1-4</sub>alkyl.

4. (Original) The method of any one of claims 1 to 3 wherein

$R^1$  is -H, or  $C_{1-12}$ alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol,  $C_{1-4}$ alkoxy or  $C_{1-4}$ alkylthio.

5. (Previously presented) The method of any one of claims 1 to 3, wherein

$R^2$  is -H,  
-C(O)-NH<sub>2</sub>,  
-NH<sub>2</sub>,  
-NH-Q-V-T as defined in claim 1; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 1;

unless X is N in which case  $R^2$  is absent.

6. (Previously presented) The method of any one of claims 1 to 3, wherein

$R^2$  is -C(O)-NH<sub>2</sub>,  
-NH-Q-V-T as defined in claim 1; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 1;

unless X is N in which case  $R^2$  is absent.

7. (Previously presented) The method of any one of claims 1 to 3, wherein

$R^2$  is -C(O)-NH<sub>2</sub>,  
-NH-Q-V-T, wherein Q is -C(O)-NH-, or -C(O)O-;

V is as defined in claim 1; and

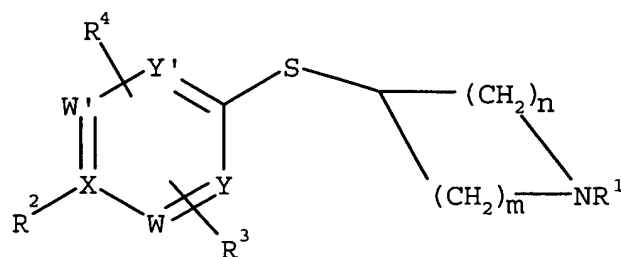
T is as defined in claim 1; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 1;

unless X is N in which case  $R^2$  is absent.

8-12. (Canceled)

13. A compound represented by Formula (I) or pharmaceutically acceptable salts thereof:



(I)

wherein:

$R^1$  is -H,

$C_{1-12}$ alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol,  $C_{1-4}$ alkoxy or  $C_{1-4}$ alkylthio, or

aryl- $C_{1-4}$ alkyl;

$R^2$  is -H,

-OH,

-C(O)-NH<sub>2</sub>,

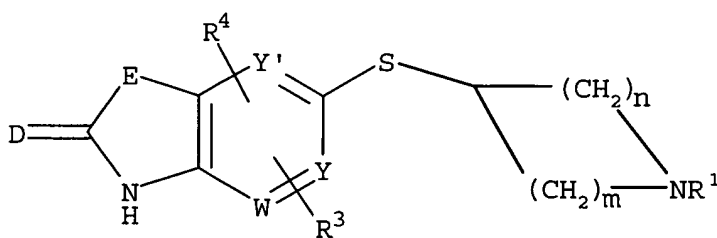
-NH<sub>2</sub>,

-NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or -SO<sub>2</sub>-;

V is H, aryl, aryl- $C_{1-12}$ alkyl, diaryl- $C_{1-12}$ alkyl, lactonyl, or  $C_{1-18}$ alkyl optionally substituted with halogen, hydroxyl,  $C_{1-4}$ alkoxy, -C(O)OC<sub>1-4</sub>alkyl, -OC(O)C<sub>1-4</sub>alkyl, aryl- $C_{1-4}$ alkoxy, aryloxy, or SO<sub>2</sub>C<sub>1-4</sub>alkyl; and

T is H, halogen,  $C_{1-5}$ alkyl,  $C_{1-4}$ alkoxy, nitro, aryl, aryl- $C_{1-4}$ alkyl, or aryloxy unless V is H in which case T is absent; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)



(Ia)

wherein D is O or S; and

E is O, S, NR<sup>5</sup>, C(R<sup>5</sup>)<sub>2</sub>, O-CR<sup>5</sup>, NR<sup>5</sup>-CR<sup>5</sup>, NR<sup>5</sup>-CO, CR<sup>5</sup><sub>2</sub>-O, CR<sup>5</sup><sub>2</sub>-S(O), CR<sup>5</sup><sub>2</sub>-NR<sup>5</sup>, CR<sup>5</sup><sub>2</sub>-CR<sup>5</sup>, CO-NR<sup>5</sup>, or CR<sup>5</sup>=CR<sup>5</sup>;

unless X is N in which case R<sup>2</sup> is absent

$R^3$  is H, halogen,  $C_{1-4}$ alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano,  $CF_3$ ,  $OC_{1-4}$ alkyl, aryloxy, aryl $C_{1-4}$ alkyl, aryl $C_{1-4}$ alkoxy,  $C_{3-10}$ cycloalkoxy, carboxy, carbonamido,  $-CO-$ ,  $-CO_2H$ ,  $-NH_2$ ,  $NH-C_{1-4}$ alkyl, aryl, hydroxy,  $-SO_2NH_2$ ,  $-SO_2NHC_{1-4}$ alkyl, or  $-C_{1-4}$ alkyl-OH;

$R^4$  is H, halogen,  $C_{1-4}$ alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano,  $CF_3$ ,  $OC_{1-4}$ alkyl, aryloxy, aryl $C_{1-4}$ alkyl, aryl $C_{1-4}$ alkoxy,  $C_{3-10}$ cycloalkoxy, carboxy, carbonamido,  $-CO-$ ,  $-CO_2H$ ,  $-NH_2$ ,  $NH-C_{1-4}$ alkyl, aryl, hydroxy,  $-SO_2NH_2$ ,  $-SO_2NHC_{1-4}$ alkyl, or  $-C_{1-4}$ alkyl-OH;

$R^5$  is each independently H or  $C_{1-4}$ alkyl;

X is C or N;

W is C or N;

W' is C or N;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring;

m is 1, 2, or 3;

n is 1, 2, or 3; and

the sum of m and n is ~~2, 3, 4, 5, or 6~~;

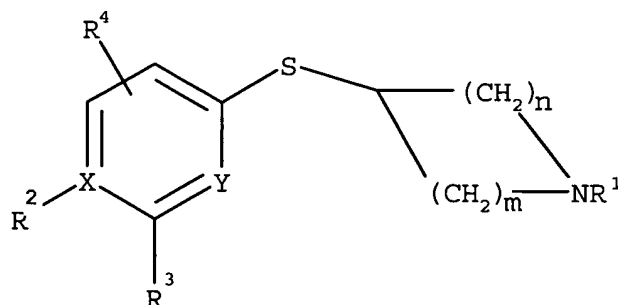
provided that when X, W, W', Y and Y' are all C and  $R^3$  and  $R^4$  are H,  $R^2$  may not be  $-OH$ ;

and that

when one of X, Y and Y' is N and  $R^3$  and  $R^4$  are H,  $R^2$  may not be H;

and that when  $R^2$  is H, OH or  $NH_2$  and  $R^3$  and  $R^4$  are H,  $R^1$  may not be aryl- $C_{1-4}$ alkyl;

and excluding compounds represented by Formula I'' or pharmaceutically acceptable salts thereof:



(I'')

wherein:

$R^1$ , X, Y, m and n are as defined above

$R^2$  is  $-H$ ,

-NH<sub>2</sub>,

-NH-Q-V-T, wherein Q is -C(O)- or -SO<sub>2</sub>- and

V and T are as defined above;

unless X is N in which case R<sup>2</sup> is absent

R<sup>3</sup> is H, halogen, C<sub>1-4</sub>alkyl, OC<sub>1-4</sub>alkyl, -NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, or hydroxy;

R<sup>4</sup> is H, halogen, C<sub>1-4</sub>alkyl, OC<sub>1-4</sub>alkyl, CO<sub>2</sub>H, -NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, or hydroxy.

14. (Original) A compound as claimed in claim 13 wherein

R<sup>1</sup> is -H, or

C<sub>1-12</sub>alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C<sub>1-4</sub>alkoxy or C<sub>1-4</sub>alkylthio.

15. (Original) A compound as claimed in claim 13 or claim 14, wherein

R<sup>2</sup> is -H,

-C(O)-NH<sub>2</sub>,

-NH<sub>2</sub>,

-NH-Q-V-T as defined in claim 13; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 13;

unless X is N in which case R<sup>2</sup> is absent.

16. (Original) A compound as claimed in any one of claims 13 to 15, wherein

R<sup>2</sup> is -C(O)-NH<sub>2</sub>,

-NH-Q-V-T as defined in claim 13; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 13;

unless X is N in which case R<sup>2</sup> is absent.

17. (Previously presented) A compound as claimed in any one of claims 13 to 14, wherein

R<sup>2</sup> is -C(O)-NH<sub>2</sub>,

-NH-Q-V-T, wherein Q is -C(O)-NH-, or -C(O)O-;

V is as defined in claim 13; and

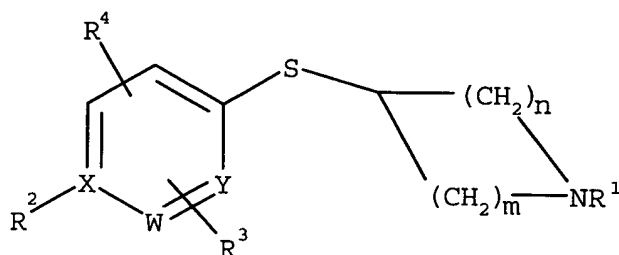
T is as defined in claim 13; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 13;



unless X is N in which case R<sup>2</sup> is absent.

18. (Currently amended) A compound as claimed in claim 13 which is represented by Formula (II) or pharmaceutically acceptable salts thereof:



(II)

wherein:

- R<sup>1</sup> is -H; or  
C<sub>1-12</sub> alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C<sub>1-4</sub> alkoxy or C<sub>1-4</sub> alkylthio; or  
aryl-C<sub>1-4</sub> alkyl;
- R<sup>2</sup> is -H;  
-OH;  
-C(O)-NH<sub>2</sub>  
-NH<sub>2</sub>;  
-NH-Q-V-T
- Q is -C(O)-;  
-C(O)-NH-;  
-C(O)O-; or  
-SO<sub>2</sub>-
- V is aryl;  
aryl-C<sub>1-12</sub> alkyl;  
diaryl-C<sub>1-12</sub> alkyl;  
lactonyl; or  
C<sub>1-18</sub> alkyl optionally substituted with halogen, hydroxyl, C<sub>1-4</sub> alkoxy, -C(O)OC<sub>1-4</sub> alkyl, -OC(O)C<sub>1-4</sub> alkyl, aryl-C<sub>1-4</sub> alkoxy, aryloxy, SO<sub>2</sub>C<sub>1-4</sub> alkyl;
- T is H;  
halogen;  
aryl;

aryl-C<sub>1-4</sub> alkyl; or

aryloxy;

unless X is N in which case R<sup>2</sup> is absent

R<sup>3</sup> and R<sup>4</sup> are each independently selected from H, halogen, C<sub>1-4</sub> alkyl, cyano, CF<sub>3</sub>, OC<sub>1-4</sub> alkyl, aryloxy, arylC<sub>1-4</sub>alkoxy, C<sub>3-10</sub> cycloalkoxy, carboxy, carbonamido, -CO-, -CO<sub>2</sub>H, -NH<sub>2</sub>, NH-C<sub>1-4</sub> alkyl, aryl, hydroxy, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHC<sub>1-4</sub> alkyl, -C<sub>1-4</sub> alkyl-OH;

X is C or N;

W is C or N, provided that both X and Y are not N;

Y is C or N

m is 1, 2, or 3;

n is 1, 2, or 3; and

the sum of m and n is ~~2, 3, 4, 5, or 6~~.

19. (Original) A compound as claimed in claim 18 wherein R<sup>1</sup> is H; C<sub>1-6</sub> alkyl optionally substituted with 1 or 2 hydroxyl groups; or aryl-C<sub>1-4</sub> alkyl.

20. (Original) A compound as claimed in claim 19 wherein R<sup>1</sup> is benzyl, p-methoxybenzyl, furanylmethyl, imidazolymethyl, pyridinylmethyl, thienylmethyl, pyridylmethyl, N-hydroxypyridylmethyl or thiazolymethyl.

21. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is H, R<sup>3</sup> is carbonamido (-CONH<sub>2</sub>) or C<sub>1-4</sub> alkyl-OH, and R<sup>4</sup> is H, C<sub>1-4</sub>alkyl, CF<sub>3</sub>, halogen or cyano.

22. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is OH, and R<sup>3</sup> and R<sup>4</sup> each independently represent H, C<sub>1-4</sub>alkyl, CF<sub>3</sub>, cyano or halogen.

23. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula -NH-Q-V-T; T is H and R<sup>3</sup> and R<sup>4</sup> each independently represent H, methyl, CF<sub>3</sub>, chloro- or cyano-.

24. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula -NH-SO<sub>2</sub>-V-T; V is aryl, -C<sub>1-12</sub> alkyl or aryl-C<sub>1-12</sub> alkyl; R<sup>3</sup> is H, methyl, CF<sub>3</sub>, Cl or cyano and R<sup>4</sup> is H.

25. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula –NH-SO<sub>2</sub>-V-T, V is selected from C<sub>1-12</sub> alkyl, phenyl, naphthyl, thienyl, oxazolyl, isoxazolyl, or phenyl(CH=CH)–, optionally substituted with 1, 2, 3 or 4 substituents selected from:

-NO<sub>2</sub>;  
halogen;  
-CF<sub>3</sub>;  
C<sub>1-12</sub> alkoxy;  
C<sub>1-12</sub> alkylthio;  
C<sub>1-12</sub> alkyl;  
C<sub>1-4</sub> alkylsulfonyl;  
-CN;  
-OCF<sub>3</sub>;  
-C(O)OC<sub>1-4</sub> alkyl;  
-OCH<sub>2</sub>CF<sub>3</sub>;  
-NHC(O) C<sub>1-4</sub> alkyl.

26. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula –NH-SO<sub>2</sub>-V-T, T is selected from H; or diazole, oxazole, isoxazole, phenyl or phenoxy, optionally substituted with 1, 2, 3 or 4 substituents selected from

-NO<sub>2</sub>;  
halogen;  
-CF<sub>3</sub>;  
C<sub>1-12</sub> alkoxy;  
C<sub>1-12</sub> alkylthio;  
C<sub>1-12</sub> alkyl;  
C<sub>1-4</sub> alkylsulfonyl;  
-CN;  
-OCF<sub>3</sub>;  
-C(O)OC<sub>1-4</sub> alkyl;  
-OCH<sub>2</sub>CF<sub>3</sub>;  
-NHC(O) C<sub>1-4</sub> alkyl.

27. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula –NH-SO<sub>2</sub>-V-T, V is selected from 3-chloro-4-methylphenyl, 3-chlorophenyl, 3-methoxyphenyl, 4-bromophenyl, 4-methoxyphenyl, 4-methylphenyl, naphthyl, 2,4,6-trimethylphenyl, phenyl(CH=CH)–,

4-chlorophenyl, 2-chlorophenyl, 2,5-dichlorothiophen-3-yl, 2,5,6-trimethyl-4-methoxyphenyl, 4-methoxyphenyl, 2,3,4-trifluorophenyl, 3-cyanophenyl, 2-methoxycarbonylthien-3-yl or 4-pentylphenyl and T is H.

28. (Original) A compound as claimed in any one of claims 18 to 20 wherein  $R^2$  is of formula  $-NH-SO_2-V-T$ , T is 2-chloro-5-nitrophenoxy and V is phenyl.

29. (Original) A compound as claimed in any one of claims 18 to 20 wherein  $R^2$  is of formula  $-NH-C(O)-V-T$  wherein V is selected from

aryl;  
aryl- $C_{1-12}$  alkyl;  
diaryl- $C_{1-12}$  alkyl;  
lactonyl; or  
 $C_{1-18}$  alkyl optionally substituted with halogen, hydroxyl,  $C_{1-4}$  alkoxy,  $C(O)OC_{1-4}$  alkyl,  $OC(O)C_{1-4}$  alkyl, aryl- $C_{1-4}$  alkoxy, aryloxy.

30. (Original) A compound as claimed in any one of claims 18 to 20 wherein  $R^2$  is of formula  $-NH-C(O)-V-T$ , and V is selected from  $C_{1-12}$  alkyl, phenyl, phenyl- $C_{1-12}$  alkyl, diphenylmethyl, naphthyl, furanyl, thienyl, diazolyl, pyridinyl, thiazolyl, benzothienyl, fluorenyl, oxazolyl or isoxazolyl, optionally substituted with 1, 2, 3 or 4 substituents independently selected from

$-NO_2$ ;  
halogen;  
 $-CF_3$ ;  
 $C_{1-12}$  alkoxy;  
 $C_{1-12}$  alkylthio;  
 $C_{1-12}$  alkyl;  
 $C_{1-4}$  alkylsulfonyl;  
 $-CN$ ;  
 $-OCF_3$ ;  
 $-C(O)O-C_{1-4}$  alkyl;  
 $-OCH_2CF_3$ .

31. (Original) A compound as claimed in any one of claims 18 to 20 wherein  $R^2$  is of formula  $-NH-C(O)-V-T$ , T is selected from

H;  
halogen; or

diazole, oxazole, isoxazole, phenyl, phenoxy or benzodioxanyl optionally substituted with 1, 2, 3 or 4 substituents selected from

-NO<sub>2</sub>;  
halogen;  
-CF<sub>3</sub>;  
C<sub>1-12</sub> alkylthio;  
C<sub>1-12</sub> alkoxy;  
C<sub>1-12</sub> alkyl;  
C<sub>1-4</sub> alkylsulfonyl;  
-CN;  
-OCF<sub>3</sub>;  
-C(O)O-C<sub>1-4</sub> alkyl.

32. (Original) A compound as claimed in any one of Claims 18 to 20 wherein R<sup>2</sup> is of formula -NH-C(O)N-V-T wherein V is selected from

C<sub>1-18</sub> alkyl optionally substituted with halogen, hydroxyl, C<sub>1-4</sub> alkoxy, C(O)OC<sub>1-4</sub> alkyl, OC(O)C<sub>1-4</sub> alkyl, aryl-C<sub>1</sub> alkoxy, aryloxy;  
aryl; or  
aryl-C<sub>1-12</sub> alkyl.

33. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula -NH-C(O)NH-V-T, V is selected from phenyl, phenyl-C<sub>1-12</sub> alkyl or naphthyl optionally substituted with 1, 2, 3 or 4 substituents selected from

-NO<sub>2</sub>;  
halogen;  
-CF<sub>3</sub>;  
C<sub>1-12</sub> alkylthio;  
C<sub>1-12</sub> alkoxy;  
C<sub>1-12</sub> alkyl;  
C<sub>1-4</sub> alkylsulfonyl;  
-CN;  
-OCF<sub>3</sub>;  
-C(O)O-C<sub>1-4</sub> alkyl.

34. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula -NH-C(O)O-V-T, wherein V is selected from

C<sub>1-18</sub> alkyl optionally substituted with halogen, hydroxyl, C<sub>1-4</sub> alkoxy, C(O)OC<sub>1-4</sub> alkyl, OC(O)C<sub>1-4</sub> alkyl, aryl-C<sub>1-4</sub> alkoxy, aryloxy; aryl; or aryl-C<sub>1-12</sub> alkyl.

35. (Original) A compound as claimed in any one of claims 18 to 20 wherein R<sup>2</sup> is of formula –NH-C(O)O-V-T, preferably V is selected from phenyl or phenyl-C<sub>1-12</sub> alkyl optionally substituted with 1, 2, 3 or 4 substituents selected from

–NO<sub>2</sub>;  
halogen;  
–CF<sub>3</sub>;  
C<sub>1-12</sub> alkylthio;  
C<sub>1-12</sub> alkoxy;  
C<sub>1-12</sub> alkyl;  
C<sub>1-4</sub> alkylsulfonyl;  
–CN;  
–OCF<sub>3</sub>;  
–C(O)O-C<sub>1-4</sub> alkyl; or  
–OCH<sub>2</sub>CF<sub>3</sub>.

36. (Original) A compound as claimed in claim 13 wherein R<sup>2</sup> is of formula –NH-C(O)-  
V-T  
wherein V is H, C<sub>1-6</sub>alkyl, C<sub>3-6</sub>cycloalkyl, aryl or aryl-C<sub>1-12</sub>alkyl; and  
T is H, halogen, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>alkoxy, nitro, aryl, aryl-C<sub>1-4</sub>alkyl, or aryloxy unless V is H  
in which case T is absent.

37. (Original) A compound as claimed in claim 36  
wherein V is H, C<sub>1-6</sub>alkyl or C<sub>3-6</sub>cycloalkyl, and  
T is H unless V is H in which case T is absent.

38. (Original) A compound as claimed in claim 36  
wherein V is aryl or aryl-C<sub>1-12</sub>alkyl, and  
T is H, halogen, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>alkoxy, nitro, aryl, aryl-C<sub>1-4</sub>alkyl, or aryloxy.

39. (Original) A compound as claimed in claim 38  
wherein V is phenyl, pyridyl, thienyl, thiazolyl, thiadiazolyl, or phenyl-C<sub>1-6</sub>alkyl; and

T is H, halogen, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>alkoxy, nitro, aryl, aryl-C<sub>1-4</sub>alkyl, or aryloxy.

40. (Currently amended) A compound as claimed in claim 13

wherein

R<sup>1</sup> is -H,  
C<sub>1-12</sub>alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C<sub>1-4</sub>alkoxy or C<sub>1-4</sub>alkylthio, or aryl-C<sub>1-4</sub>alkyl;  
R<sup>2</sup> is -NH<sub>2</sub>, or  
-NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or -SO<sub>2</sub>-;  
V is H, aryl, aryl-C<sub>1-12</sub>alkyl, diaryl-C<sub>1-12</sub>alkyl, lactonyl, or C<sub>1-18</sub>alkyl optionally substituted with halogen, hydroxyl, C<sub>1-4</sub>alkoxy, -C(O)OC<sub>1-4</sub>alkyl, -OC(O)C<sub>1-4</sub>alkyl, aryl-C<sub>1-4</sub>alkoxy, aryloxy, or SO<sub>2</sub>C<sub>1-4</sub>alkyl; and  
T is H, halogen, aryl, aryl-C<sub>1-4</sub>alkyl, or aryloxy unless V is H in which case T is

absent,

R<sup>3</sup> is H, halogen, C<sub>1-4</sub>alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF<sub>3</sub>, OC<sub>1-4</sub>alkyl, aryloxy, arylC<sub>1-4</sub>alkyl, arylC<sub>1-4</sub>alkoxy, C<sub>3-10</sub>cycloalkoxy, carboxy, carbonamido, -CO-NH-C<sub>1-4</sub>alkyl, aryl, hydroxy, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHC<sub>1-4</sub>alkyl, or -C<sub>1-4</sub>alkyl-OH;  
R<sup>4</sup> is H, halogen, C<sub>1-4</sub>alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF<sub>3</sub>, OC<sub>1-4</sub>alkyl, aryloxy, arylC<sub>1-4</sub>alkyl, arylC<sub>1-4</sub>alkoxy, C<sub>3-10</sub>cycloalkoxy, carboxy, carbonamido, -CO-NH-C<sub>1-4</sub>alkyl, aryl, hydroxy, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHC<sub>1-4</sub>alkyl, or -C<sub>1-4</sub>alkyl-OH;

X is

C;  
W is C or N;  
W' is C or N;  
Y is C or N;  
Y' is C or N;

provided that there are not more than two N atoms in the aryl ring and provided that at least one of W, W', Y or Y' is N;

m is 1, 2, or 3;  
n is 1, 2, or 3; and  
the sum of m and n is ~~2, 3, 4, 5, or 6~~.

41. (Original) A compound as claimed in claim 40

wherein

W is C;  
W' is C;  
Y' is C; and  
Y is N.

42. (Original) A compound as claimed in claim 40

wherein

W is N;  
W' is C;  
Y' is C; and  
Y is C.

43. (Original) A compound as claimed in any one of claims 40 to 42

wherein R<sup>2</sup> is -NH<sub>2</sub>.

44. (Original) A compound as claimed in any one of claims 40 to 42

wherein

R<sup>2</sup> is -NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or -SO<sub>2</sub>-;  
V is H, aryl, aryl-C<sub>1-12</sub>alkyl, diaryl-C<sub>1-12</sub>alkyl, lactonyl, or C<sub>1-18</sub>alkyl optionally substituted with halogen, hydroxyl, C<sub>1-4</sub>alkoxy, -C(O)OC<sub>1-4</sub>alkyl, -OC(O)C<sub>1-4</sub>alkyl, aryl-C<sub>1-4</sub>alkoxy, aryloxy, or SO<sub>2</sub>C<sub>1-4</sub>alkyl; and  
T is H, halogen, aryl, aryl-C<sub>1-4</sub>alkyl, or aryloxy unless V is H in which case T is absent.

45. (Original) A compound as claimed in claim 44

wherein Q is -SO<sub>2</sub>- or -CO-.

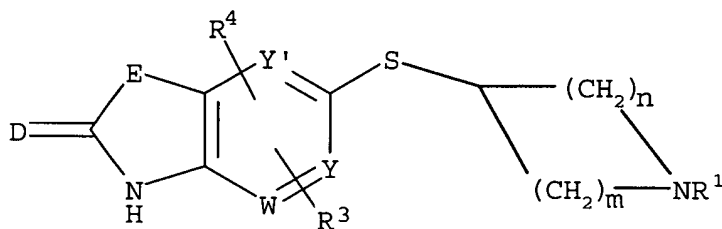
46. (Currently amended) A compound as claimed in Claim 13

wherein:

R<sup>1</sup> is -H,  
C<sub>1-12</sub>alkyl optionally substituted with 1, 2 or 3 groups independently selected  
from halogen, hydroxyl, thiol, C<sub>1-4</sub>alkoxy or C<sub>1-4</sub>alkylthio, or  
aryl-C<sub>1-4</sub>alkyl;



$R^2$  is linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)



(Ia)

wherein D is O or S; and

E is O, S,  $NR^5$ , or  $C(R^5)_2$ ,

$R^3$  is H, halogen,  $C_{1-4}$ alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano,  $CF_3$ ,  $OC_{1-4}$ alkyl, aryloxy, aryl $C_{1-4}$ alkyl, aryl $C_{1-4}$ alkoxy,  $C_{3-10}$ cycloalkoxy, carboxy, carbonamido,  $-CO-NH-C_{1-4}$ alkyl, aryl, hydroxy,  $-SO_2NH_2$ ,  $-SO_2NHC_{1-4}$ alkyl, or  $-C_{1-4}$ alkyl-OH;

$R^4$  is H, halogen,  $C_{1-4}$ alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano,  $CF_3$ ,  $OC_{1-4}$ alkyl, aryloxy, aryl $C_{1-4}$ alkyl, aryl $C_{1-4}$ alkoxy,  $C_{3-10}$ cycloalkoxy, carboxy, carbonamido,  $-CO-NH-C_{1-4}$ alkyl, aryl, hydroxy,  $-SO_2NH_2$ ,  $-SO_2NHC_{1-4}$ alkyl, or  $-C_{1-4}$ alkyl-OH;

$R^5$  is each independently H or  $C_{1-4}$ alkyl;

X is C;

W is C or N;

W' is C;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring,

m is 1, 2, or 3;

n is 1, 2, or 3; and

the sum of m and n is ~~2, 3, 4, 5, or 6~~.

47.

A compound as claimed in Claim 46 wherein E is O or  $NR^5$ .

48. A compound as claimed in Claim 46 or 47 wherein  $R^5$  is/are each independently H or  $C_{1-4}$ alkyl.

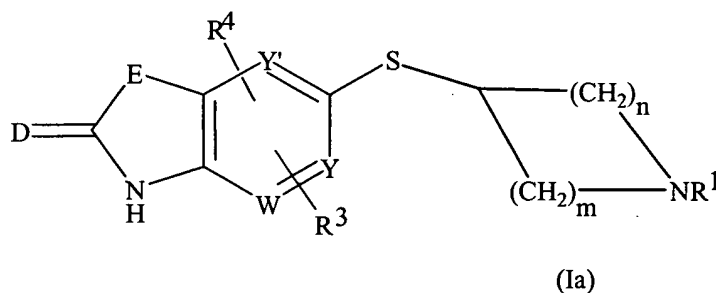
49. A compound as claimed in Claim 13

wherein:

$R^1$  is -H,

$C_{1-12}$ alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol,  $C_{1-4}$ alkoxy or  $C_{1-4}$ alkylthio, or aryl- $C_{1-4}$ alkyl;

$R^2$  is linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)



wherein D is O or S; and

E is  $O-CR^5_2$ ,  $NR^5-CR^5_2$ ,  $NR^5-CO$ ,  $CR^5_2-O$ ,  $CR^5_2-S(O)_t$ ,  $CR^5_2-NR^5$ ,  $CR^5_2-CR^5_2$ ,  $CO-NR^5$ , or  $CR^5=CR^5$ ;

$R^3$  is H, halogen,  $C_{1-4}$ alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano,  $CF_3$ ,  $OC_{1-4}$ alkyl, aryloxy, aryl $C_{1-4}$ alkyl, aryl $C_{1-4}$ alkoxy,  $C_{3-10}$ cycloalkoxy, carboxy, carbonamido,  $-CO-NH-C_{1-4}$ alkyl, aryl, hydroxy,  $-SO_2NH_2$ ,  $-SO_2NHC_{1-4}$ alkyl, or  $-C_{1-4}$ alkyl-OH;

$R^4$  is H, halogen,  $C_{1-4}$ alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano,  $CF_3$ ,  $OC_{1-4}$ alkyl, aryloxy, aryl $C_{1-4}$ alkyl, aryl $C_{1-4}$ alkoxy,  $C_{3-10}$ cycloalkoxy, carboxy, carbonamido,  $-CO-NH-C_{1-4}$ alkyl, aryl, hydroxy,  $-SO_2NH_2$ ,  $-SO_2NHC_{1-4}$ alkyl, or  $-C_{1-4}$ alkyl-OH;

$R^5$  is each independently H,  $C_{1-4}$ alkyl;

X is C;

W is C or N;

W' is C;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring;

m is 1, 2, or 3;

n is 1, 2, or 3; and

the sum of m and n is 2, 3, 4, 5, or 6.

50. A compound as claimed in Claim 49 wherein E is O-CR<sup>5</sup><sub>2</sub>, NR<sup>5</sup>-CR<sup>5</sup><sub>2</sub>, NR<sup>5</sup>-CO, CR<sup>5</sup><sub>2</sub>-CR<sup>5</sup><sub>2</sub>, or CR<sup>5</sup>=CR<sup>5</sup>.

51. A compound as claimed in Claim 49 or 50 wherein E is O-CR<sup>5</sup><sub>2</sub>, NR<sup>5</sup>-CO, or CR<sup>5</sup>=CR<sup>5</sup>.

52. (previously presented) A compound as claimed in any one of Claims 49 to 50 wherein R<sup>5</sup> is/are each independently H or C<sub>1-4</sub>alkyl.

53. (canceled)

54. (previously presented) A compound as claimed in any one of claims 18 to 20 wherein m is 2 and n is 2.

55. (previously presented) A compound as claimed in any one of claims 18 to 20 wherein X, Y and W are C.

56. (canceled)

57. (previously presented) A pharmaceutical composition comprising a compound of claim 13 with a pharmaceutically acceptable diluent or carrier.